

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. R2-2002-0058

ADOPTION OF FINAL SITE CLEANUP REQUIREMENTS AND RESCISSION OF  
ORDER NOS. 95-210 & 98-033 FOR:

EATON CORPORATION,  
PHILIPS SEMICONDUCTORS INC.,  
JOHN D. STODDARD TRUST, AND  
LIMAR REALTY CORP. #27

for the property located at

680 WEST MAUDE AVENUE  
SUNNYVALE  
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter Board), finds that:

1. **Site Location:** The site is located at 680 West Maude Avenue in Sunnyvale. The site is flat to gently sloping and about 2 acres in area. The site consists of a single story building, paved parking areas, and landscaping. The area is a commercial/industrial area and is dominated by low rise industrial buildings typical of the electronics industry of Santa Clara County. The majority of the area was developed in the late 1960s and early 1970s. Many of the current buildings in the area, including the Site building, were constructed during redevelopment in the 1980s. The Site is bounded on the north by West Maude Avenue, on the south, west, and east by light industrial properties. Moffett Field Naval Air Station is less than a mile to the north, Highway 101 is approximately one-half mile north, and Mathilda Avenue is one block east.
2. **Site History:** In 1961 the site was developed and the original building built by the site owner Peery Realtors. Signetics Corporation (Signetics) then occupied the site from 1961 until 1968. Signetics performed research and development, and fabricated semiconductors at the site until 1963. Limited research and development, and administrative functions were performed at the site until 1968 when Signetics terminated the lease and vacated the site. Signetics used and stored TCE as part of their operations.

The John D. Stoddard Trust acquired the site and owned it from May 1973 until March 1985. Beginning in 1974, Addington Laboratories (Addington) occupied the site and manufactured electronic microwave components and semiconductors. Operations included electroplating, anodizing, chemical etching and milling. Addington was acquired by Cutler-Hammer in 1979 and Cutler-Hammer was acquired by Eaton Corporation (Eaton) shortly thereafter. Eaton's operations included the use of acids, bases, and various solvents, including TCE. Operations continued at the site until March 1985.

The building on the site was demolished in 1985 and the present structure was built. In 1985 PaineWebber Qualified Plan Property Fund Four, L.P. (PaineWebber) purchased the land without taking title to the improvements. PaineWebber took title to the improvements in 1991 through foreclosure. On May 29, 1998, PaineWebber sold the property to Limar Realty Corporation #27 (Limar). Limar is the current owner of the site.

Signetics, Eaton, and Eaton's predecessors in interest, discharged treated industrial wastewater to the City of Sunnyvale's sanitary sewer system. Wastewater samples were collected on a regular basis during Eaton's tenancy. The City of Sunnyvale issued numerous violation notices to Eaton regarding the collected samples. The reported violations include elevated levels of TCE, TCA, DCE, and low pH. A report from an inspection conducted on July 17, 1981 noted that a leaking drum of TCE on the dirt lot behind the premises, and that the waste storage facilities were uncovered and unbermed. During formal closure of the site in 1985, Eaton reported to the City of Sunnyvale that no contamination or evidence of leaks were identified in connection with the site's wastewater treatment system.

3. **Named Dischargers:** Eaton Corporation is hereby named as a discharger because as a past tenant at the site Eaton and its predecessor companies used and stored chemicals that have polluted soil and groundwater at the site.

Philips Semiconductors, Inc. is hereby named as a discharger because they are the successor company to Signetics Corporation. As a past tenant at the site Signetics used and stored chemicals that have polluted soil and groundwater at the site.

The John D. Stoddard Trust is hereby named as a secondarily responsible discharger because it was the owner of the property at a time that discharges of pollutants to soil and groundwater are believed to have occurred.

Limar Realty Corporation #27 is hereby named as a secondarily responsible discharger because it is the current owner of the property.

The secondarily responsible dischargers will be responsible for compliance only if the Board or Executive Officer finds that other named dischargers have failed to comply with the requirements of this order.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the site where it entered or could have entered waters of the state, the Board will consider adding those parties' names to this order.

4. **Regulatory Status:** This site is subject to the following Board orders:

- o Site Cleanup Requirements (Order No. 95-210) adopted October 18, 1995
- o Amendment of Site Cleanup Requirements (Order No. 98-033) adopted June 9, 1998
- o NPDES General Permit (Order No. 99-051) adopted on July 21, 1999

5. **Site Hydrogeology:** The site is located in the Santa Clara Valley, a structural basin filled with marine and alluvial sediments. The coarser deposits are probably the result of deposition in or near stream channels that drain the highlands that surround the basin. Finer grain deposits result from a variety of conditions with the eventual result of a heterogeneous sequence of interbedded sands, silts, and clays. Municipal water supply wells tap an extensive deep regional confined aquifer that lies generally greater than 200 feet below ground surface (bgs). A thick, relatively impermeable aquitard separates this deep confined aquifer from a complex series of discontinuous aquifers and aquitards that may extend up to within a few feet of the ground surface. The subsurface has been investigated to a depth of 60 feet at the site. Soil ranges from coarse-grained sands and gravels to fine-grained silty clays. Groundwater is first encountered at about 12-14 feet bgs. Two water bearing zones have been identified and investigated at the site. The first encountered water bearing zone lies generally between 14 and 27 feet bgs and is referred to as the upper subzone. The total thickness of sands and gravels in the upper subzone varies from less than 1 foot up to 13 feet. The sands and gravels can occur as a single unit or as two distinct units (the U1 and U2 units) separated by thin silt and clay interbeds.

Directly underlying the upper subzone are clays and silty clays which locally contain channels and stringers of sand and gravel. These channels appear to be less than 30-40 feet wide and locally are as much as 10 feet thick. The channels occur at depths between 27 to 60 bgs. Collectively, these deeper sands are referred to as the lower subzone. Groundwater flow in the upper subzone and lower subzone is to the northeast. The groundwater gradient is approximately 0.0051 feet per foot in the upper subzone and approximately 0.0047 feet per foot in the lower subzone across the site. In general there is an upward hydraulic gradient between the lower and upper subzones.

6. **Remedial Investigation:** TCE is the main contaminant in soil at the site. Smaller amounts of DCE are also found. The concentration of TCE in vadose zone soil in those areas sampled ranges from 0.037 – 0.42 mg/kg. This is below the 1 mg/kg cleanup level for soil. No areas of elevated TCE concentrations in soil comparable to the elevated levels found in groundwater have been found. TCE and associated breakdown products (DCE and vinyl chloride) are found in groundwater at the site. High levels of groundwater contamination are present in the upper subzone, but only low levels (less than 10 ug/l) have been found in the lower subzone. The level of TCE found in groundwater at the site is much higher than the other VOCs. Currently, TCE is present at 21,000 ug/l. This is down from a level of 39,000 ug/l prior to in situ chemical oxidation treatment which took place in 2001. These high concentrations are found in the U2 unit of the upper subzone. TCE concentrations in the U1 unit at the same location are 180 ug/l. A groundwater pollutant plume approximately 250 feet wide and 800 feet long originates at the site. No definite source of the contamination has been identified. Apparently, there have been releases of VOCs to groundwater at the site in the past, however, the exact mechanism of the release(s) is unknown. An extensive soil investigation failed to identify any soil source areas. A reasonable effort has been made to find a source of the pollution and the groundwater pollutant plume has been defined.
7. **Adjacent Sites:** There are no cleanup activities going on at adjacent sites, however, not all of the VOCs adjacent to the site are attributable to contamination at the site. Some offsite sources of contamination are also present, which contribute to observed VOC concentrations in groundwater upgradient, cross-gradient, and downgradient of the Site.
8. **Interim Remedial Measures:** The installed interim remedial action consists of four groundwater extraction wells located in West Maude Avenue immediately in front of the site. There are three upper subzone extraction wells and one lower subzone extraction well. The lower subzone extraction well is not used and will be turned on only if groundwater data indicate the need for capture of VOCs in the lower subzone. The extraction system fully intercepts and captures VOCs emanating from the site. Extracted groundwater is treated in an air stripper and discharged to a storm drain. The total groundwater extraction rate is approximately 30 gallons per minute. Approximately 77 pounds of VOCs have been removed by the extraction system as of September 2001.

During 2001, in situ chemical oxidation was implemented at the site in a 50 by 100 foot area where the highest VOC concentrations are found. Temporary piezometers were installed to evaluate the effectiveness of treatment. Approximately 37,300 pounds of potassium permanganate were injected into the upper subzone via 25 injection points. Initially TCE concentrations declined significantly. There was about a 95 percent decline in TCE concentrations within the first few days. However, within about two

weeks of treatment TCE concentrations began to rebound. TCE concentrations went from 39,000 ug/l down to 1,860 ug/l and then rebounded to 21,000 ug/l in the piezometer with the highest TCE concentration. This represents about a 46 percent reduction in TCE concentration. At another location in the treatment area where concentrations of TCE were lower, TCE concentrations declined from 2,200 ug/l to non-detect and then rebounded to 4,130 ug/l. It is estimated that about 13 pounds of VOCs were destroyed as a result of the in situ chemical oxidation treatment. Based on the observed results it was concluded that in situ chemical oxidation could reduce VOC concentrations in the source area, however, it would take multiple injections and the potential for rebound of VOC concentrations is difficult to predict.

9. **Feasibility Study:** In November 2001, the dischargers submitted a report, "Proposed Final Remedial Actions and Cleanup Standards". This report comprises the dischargers' feasibility study and final remedial action plan. Levels of soil contamination at the site are below the Regional Board's risk based screening level for TCE for commercial and residential use with the exception of one sample which slightly exceeded the residential level. Therefore the report proposes that no further action be taken in regard to soil. For groundwater, the report considered four alternatives; no action, no further action, continued groundwater extraction, and in-situ chemical oxidation. The "no action" alternative was developed to use as a benchmark for evaluating other alternatives. These alternatives were evaluated for effectiveness, feasibility, and relative cost. Other potential remedial alternatives were also considered but eliminated from further consideration due to uncertain effectiveness, excessive cost, and/or disruption to tenants at the site.
10. **Cleanup Plan:** The proposed cleanup plan is presented in the November 2001 report, "Proposed Final Remedial Actions and Cleanup Standards", and consists of continued operation of the existing groundwater extraction and treatment system. The plan proposes the following narrative groundwater cleanup standards: (a) remove and treat VOCs in groundwater emanating from the site to the extent practical, and (b) limit further migration of VOCs in groundwater emanating from the site. This Order accepts the proposed cleanup plan, but modifies it to include numerical cleanup standards for groundwater (drinking water maximum contaminant levels).
11. **Risk Assessment:** The site risk assessment is contained in the November 2001 report, "Proposed Final Remedial Actions and Cleanup Standards". The exposure pathways considered potentially complete were volatilization of VOCs from groundwater to indoor air, and inhalation of volatilizing VOCs from groundwater and dermal contact with groundwater for construction workers excavating onsite. VOC levels in soil are at or below screening levels for residential use, therefore no further risk assessment for soil was considered necessary. The calculated total non-carcinogenic hazard index for exposure of site building occupants and site construction workers to VOCs in shallow

groundwater are 0.002 and 0.005, respectively. The calculated total estimated lifetime incremental carcinogenic risks for exposure of site building occupants and site construction workers to VOCs in shallow groundwater are  $5 \times 10^{-7}$  and  $6 \times 10^{-7}$ , respectively.

For comparison, the Board considers the following risks to be acceptable at remediation sites: a hazard index of 1.0 or less for non-carcinogens, and an excess cancer risk of  $10^{-4}$  to  $10^{-6}$  or less for carcinogens. Consumption of shallow groundwater would exceed this risk level. Consumption of shallow groundwater was not considered in the risk assessment because such use is not occurring and it is unlikely that such use would occur or be allowed in the future. However to ensure that such use does not occur, institutional constraints as described below will be required.

Due to excessive risk that will be present at the site pending full remediation, institutional constraints are appropriate to limit on-site exposure to acceptable levels. Institutional constraints include a deed restriction that notifies future owners of sub-surface contamination and prohibits the use of shallow groundwater beneath the site as a source of drinking water until cleanup standards are met.

## 12. **Basis for Cleanup Standards**

- a. **General:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives. The previously-cited cleanup plan confirms the Board's initial conclusion that background levels of water quality cannot be restored. This order and its requirements are consistent with Resolution No. 68-16.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

- b. **Beneficial Uses:** The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources

Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in Title 23, California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the site qualifies as a potential source of drinking water.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the site:

- o Municipal and domestic water supply
- o Industrial process water supply
- o Industrial service water supply
- o Agricultural water supply
- o Freshwater replenishment to surface waters

At present, there is no known use of groundwater underlying the site for the above purposes)

- c. **Basis for Groundwater Cleanup Standards:** The groundwater cleanup standards for the site are based on applicable water quality objectives and are the more stringent of EPA and California primary maximum contaminant levels (MCLs). Cleanup to this level will result in acceptable residual risk to humans.
- d. **Basis for Soil Cleanup Standards:** The soil cleanup standards for the site are 1 mg/kg total VOCs and 10 mg/kg total SVOCs. Cleanup to this level is intended to prevent leaching of contaminants to groundwater and will result in acceptable residual risk to humans. Currently there are no known areas of soil contamination onsite that exceed this limit.

- 13. **Future Changes to Cleanup Standards:** The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this site may not be possible. If full restoration of beneficial uses is not technologically nor economically achievable within a reasonable period of time, then the dischargers may request modification to the cleanup standards or establishment of a containment zone, a limited groundwater pollution zone where water quality

objectives are exceeded. Conversely, if new technical information indicates that cleanup standards can be surpassed, the Board may decide that further cleanup actions should be taken.

14. **Reuse or Disposal of Extracted Groundwater:** Board Resolution No. 88-160 allows discharges of extracted, treated groundwater from site cleanups to surface waters only if it has been demonstrated that neither reclamation nor discharge to the sanitary sewer is technically and economically feasible.
15. **Basis for 13304 Order:** The dischargers have caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.
16. **Cost Recovery:** Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.
17. **CEQA:** This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.
18. **Notification:** The Board has notified the dischargers and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe site cleanup requirements for the discharge, and has provided them with an opportunity to submit their written comments.
19. **Public Hearing:** The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

**IT IS HEREBY ORDERED**, pursuant to Section 13304 of the California Water Code, that the dischargers (or their agents, successors, or assigns) shall cleanup and abate the effects described in the above findings as follows:

#### **A. PROHIBITIONS**

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.



2. Further significant migration of wastes or hazardous substances through subsurface transport to waters of the State is prohibited.
3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances are prohibited.

## B. CLEANUP PLAN AND CLEANUP STANDARDS

1. **Implement Cleanup Plan:** The dischargers shall implement the cleanup plan described in finding 10.
2. **Groundwater Cleanup Standards:** The following groundwater cleanup standards shall be met in all wells identified in the Self-Monitoring Program:

Constituent	Standard (ug/l)	Basis
Trichloroethene (TCE)	5	MCL
Cis-1,2-Dichloroethene (Cis-1,2-DCE)	6	MCL
Vinyl Chloride	0.5	MCL

MCL – Drinking water maximum contaminant level

3. **Soil Cleanup Standards:** Soil cleanup standards of 1 mg/kg for total VOCs and 10 mg/kg for SVOCs shall be met in all on-site vadose-zone soils.

## C. TASKS

1. **PROPOSED INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: August 31, 2002

Submit a technical report acceptable to the Executive Officer documenting procedures to be used by the dischargers to prevent or minimize human exposure to soil and groundwater contamination prior to meeting cleanup standards. Such procedures shall include proposed language for a deed restriction prohibiting the use of shallow groundwater as a source of drinking water.

Limar Realty Corp. #27 shall cooperate with the other dischargers in preparation of the technical report and implementation of the conditions in the report.

**2. IMPLEMENTATION OF INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: 60 days after Executive Officer approval

Submit a technical report acceptable to the Executive Officer documenting that the proposed institutional constraints have been implemented. Limar Realty Corp. #27 shall cooperate with the other dischargers in preparation of the technical report, implementation of the approved institutional constraints, and recording of the approved deed restriction.

**3. FIVE-YEAR STATUS REPORT**

COMPLIANCE DATE: June 1, 2007

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the approved cleanup plan. The report should include:

- a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment
- b. Comparison of contaminant concentration trends with cleanup standards
- c. Comparison of anticipated versus actual costs of cleanup activities
- d. Performance data (e.g. groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted)
- e. Cost effectiveness data (e.g. cost per pound of contaminant removed)
- f. Summary of additional investigations (including results) and significant modifications to remediation systems
- g. Additional remedial actions proposed to meet cleanup standards (if applicable) including time schedule

If cleanup standards have not been met and are not projected to be met within a reasonable time, the report should assess the technical practicability of meeting cleanup standards and may propose an alternative cleanup strategy.

**4. PROPOSED CURTAILMENT**

COMPLIANCE DATE: 60 days prior to proposed curtailment

Submit a technical report acceptable to the Executive Officer containing a proposal to curtail remediation. Curtailment includes system closure (e.g. well abandonment), system suspension (e.g. cease extraction but wells retained), and significant system modification (e.g. major reduction in extraction rates, closure of individual extraction wells within extraction network). The report should include the rationale for curtailment. Proposals for final closure should demonstrate that cleanup standards have been met, contaminant concentrations are stable, and contaminant migration potential is minimal.

**5. IMPLEMENTATION OF CURTAILMENT**

COMPLIANCE DATE: 60 days after Executive Officer approval

Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task 8.

**6. EVALUATION OF NEW HEALTH CRITERIA**

COMPLIANCE DATE: 90 days after requested  
by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved cleanup plan of revising one or more cleanup standards in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria.

**7. EVALUATION OF NEW TECHNICAL INFORMATION**

COMPLIANCE DATE: 90 days after requested  
by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new technical information which bears on the approved cleanup plan and cleanup standards for this site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the feasibility study. Such technical reports shall not be requested unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved cleanup plan or cleanup standards.

- 8. Delayed Compliance:** If the dischargers are delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks,

the dischargers shall promptly notify the Executive Officer and the Board may consider revision to this Order.

#### D. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).
2. **Good O&M:** The dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system installed to achieve compliance with the requirements of this Order.
3. **Cost Recovery:** The dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the dischargers over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.
4. **Access to Site and Records:** In accordance with California Water Code Section 13267(c), all dischargers, including secondarily responsible dischargers, shall permit the Board or its authorized representative:
  - a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.
  - b. Access to copy any records required to be kept under the requirements of this Order.
  - c. Inspection of any monitoring or remediation facilities installed in response to this Order.
  - d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the dischargers.

5. **Self-Monitoring Program:** The dischargers shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.
6. **Contractor / Consultant Qualifications:** All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.
7. **Lab Qualifications:** All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g. temperature).
8. **Document Distribution:** Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:
  - a. County of Santa Clara Department of Environmental Health
  - b. Santa Clara Valley Water District

The Executive Officer may modify this distribution list as needed.

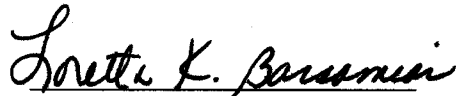
9. **Reporting of Changed Owner or Operator:** Limar Realty Corp. #27 and any subsequent owner shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.
10. **Reporting of Hazardous Substance Release:** If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the discharger shall report such discharge to the Regional Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00).

A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

11. **Secondarily-Responsible Dischargers:** Within 60 days after being notified by the Executive Officer that other named dischargers have failed to comply with this order, the secondarily responsible dischargers, Limar Realty Corp. #27, and the John D. Stoddard Trust, shall then be responsible for complying with this order. Task deadlines above will be automatically adjusted to add 60 days.
12. **Rescission of Existing Order:** This Order supercedes and rescinds Orders No. 95-210 and 98-033.
13. **Periodic SCR Review:** The Board will review this Order periodically and may revise it when necessary.

I, Loretta K. Barsamian, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on May 22, 2002.

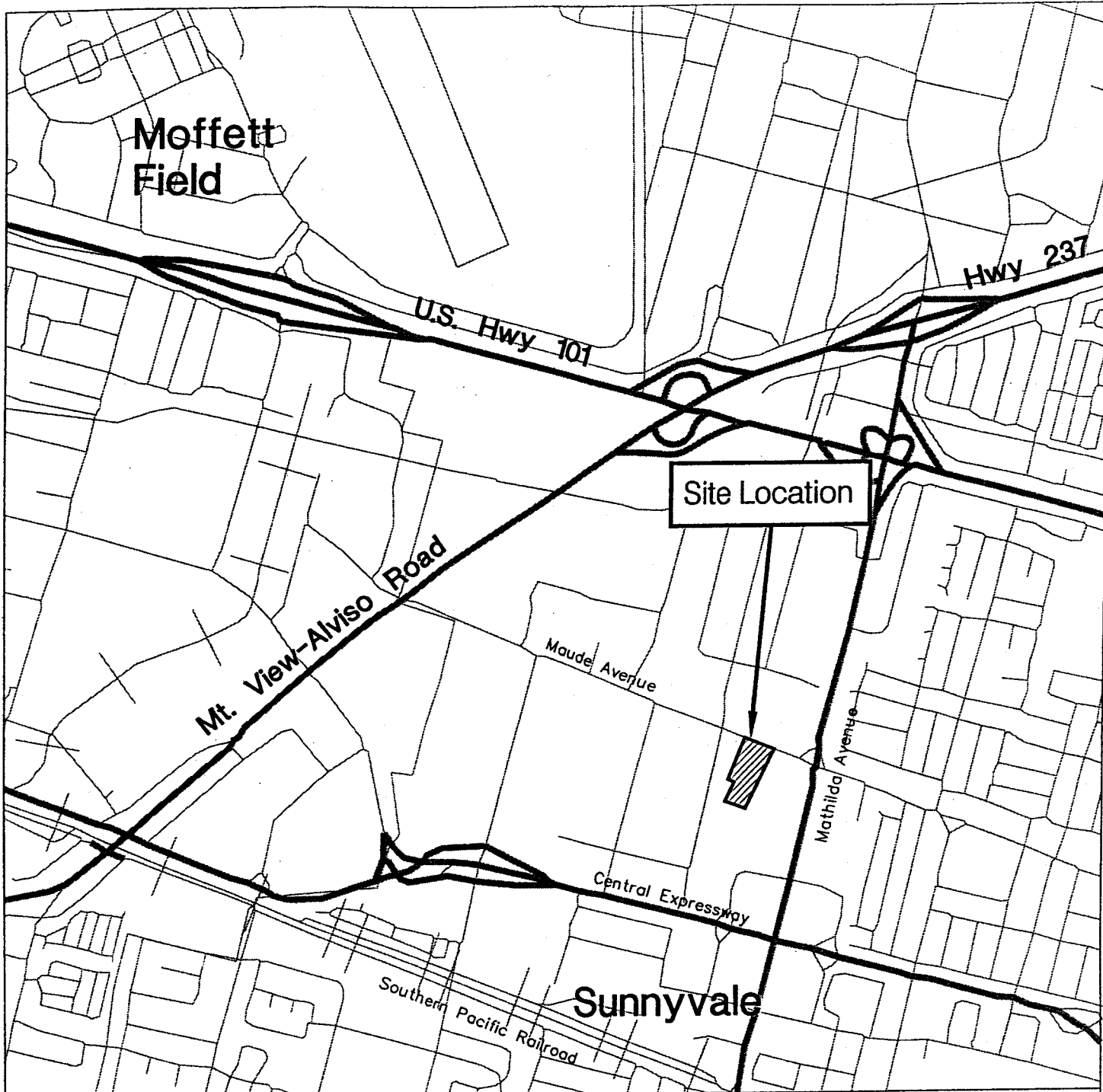
  
Loretta K. Barsamian  
Executive Officer

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FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT  
YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO:  
IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE  
SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR  
INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

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Attachments: Site Map  
Self-Monitoring Program



0 1500 3000  
(Approximate Scale in Feet)

#### Site Location

680 West Maude Avenue  
Eaton Corporation  
Philips Semiconductors  
Sunnyvale, California  
October 2001

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

EATON CORPORATION,  
PHILIPS SEMICONDUCTORS INC.,  
JOHN D. STODDARD TRUST, AND  
LIMAR REALTY CORP. #27

for the property located at

680 WEST MAUDE AVENUE  
SUNNYVALE  
SANTA CLARA COUNTY

1. **Authority and Purpose:** The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. R2-2002-0058 (site cleanup requirements).
2. **Monitoring:** The dischargers shall measure groundwater elevations quarterly in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following table:

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
01MW-8	SA	8010	05MW-1L	A	8010
01MW-9	SA	8010	05MW-2U	SA	8010
01MW-10	SA	8010	05MW-4U	SA	8010
01MW-11	SA	8010	05MW-5U	SA	8010
01MW-13	SA	8010	05MW-7U	SA	8010



Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
01MW-14	SA	8010	05MW-8L	A	8010
01MW-15	SA	8010	05MW-9U	SA	8010
05EW-1L	A	8010	05MW-10L	A	8010
05EW-1U	SA	8010	05MW-11U	SA	8010
05EW-2U	SA	8010	05MW-12L	A	8010
05EW-3U	SA	8010	05TPZ-3U2	SA	8010
05TPZ-4U1	SA	8010	05TPZ-3U1	SA	8010
05TPZ-4U2	SA	8010			

Key: SA = Semi-annually      8010 = EPA Method 8010 or equivalent  
A = Annually

The dischargers shall sample any new monitoring or extraction wells quarterly and analyze groundwater samples for the same constituents as shown in the above table. The dischargers may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Semiannual Monitoring Reports:** The dischargers shall submit semiannual monitoring reports to the Board no later than 30 days following the end of the six month period (e.g. report for first six months of the year due July 30). The first semiannual monitoring report shall be due on January 30, 2003. The reports shall include:
  - a. **Transmittal Letter:** The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the discharger's principal executive officer or his/her duly

authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

- b. **Groundwater Elevations:** Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the second semiannual report each year.
  - c. **Groundwater Analyses:** Groundwater sampling data shall be presented in tabular form, and an isoconcentration map should be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the second semi-annual report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).
  - d. **Groundwater Extraction:** If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g. soil vapor extraction), expressed in units of chemical mass per day and mass for the quarter. Historical mass removal results shall be included in the second semiannual report each year.
  - e. **Status Report:** The semiannual report shall describe relevant work completed during the reporting period (e.g. site investigation, interim remedial measures) and work planned for the following six months.
5. **Violation Reports:** If the dischargers violate requirements in the Site Cleanup Requirements, then the dischargers shall notify the Board office by telephone as soon as practicable once the dischargers have knowledge of the violation. Board staff may, depending on violation severity, require the dischargers to submit a separate technical report on the violation within five working days of telephone notification.
6. **Other Reports:** The dischargers shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential

to cause further migration of contaminants or which would provide new opportunities for site investigation.

7. **Record Keeping:** The dischargers or his/her agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.
8. **SMP Revisions:** Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the dischargers. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Loretta K. Barsamian, Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on May 22, 2002.



Loretta K. Barsamian  
Executive Officer